



The Los Angeles 100% Renewable Energy Study

Advisory Group Meeting #13

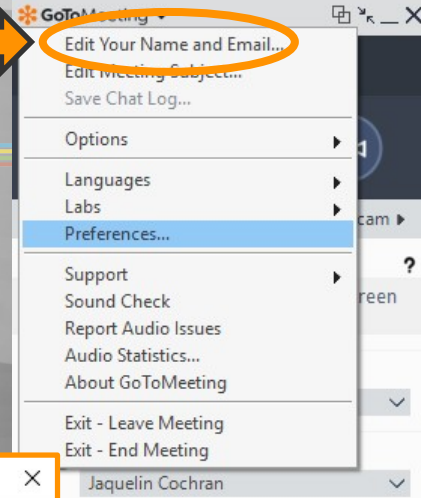
Virtual Meeting #1





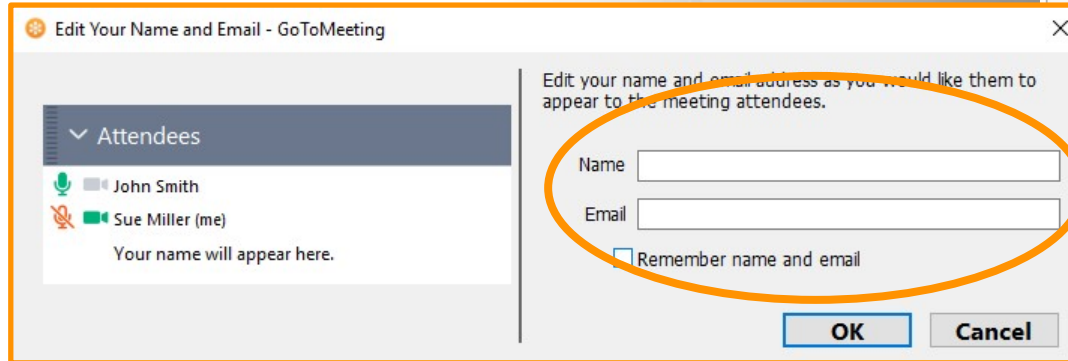
The Los Angeles 100% Renewable Energy Study

Welcome to the LA100 Advisory Group meeting!
Please consider adding your affiliation to your name identification.



Advisory Group Meeting #13

Virtual Meeting #1



Advisory Group #13 Agenda

Today (October 1)

- Welcome
- Community outreach and engagement – LA100 and more broadly (LADWP, NREL)
- Demonstration of interactive website (NREL)
- Discussion/Q&A

October 8

- (Almost) Final Results for 100% RE Investment Pathways, Part 1
- Discussion/Q&A

October 15

- (Almost) Final Results for 100% RE Investment Pathways, Part 2
- Discussion/Q&A

October 22

- (Almost) Final Results for Greenhouse Gas Emissions, Power & Non-Power Sectors
- Discussion/Q&A

Where we left off after Advisory Group Meeting #12

1. Reviewed draft **pathways to 100% RE**, including no-regrets options (e.g., wind and solar), scenario differences for addressing peaking capacity, and drivers of different cost results
2. Reviewed draft results of **job and economic impacts**, including the relationship of jobs to different scenario build-outs
3. Reviewed air pollutant **emissions inventory** and **methods for mortality and monetization**
4. Reviewed draft results for **distribution grid impacts**

What we have coming up

- Over the next two weeks we will dig into our bulk power results
- We will focus on:
 - ‘What if’ questions about investment pathways (e.g., if costs are higher or lower)
 - Breakdown of drivers of LA Leads costs (impact of 2035 vs. no biofuels)
 - Operations—what are the significant changes for maintaining balance and managing uncertainty in a 100% RE system?
 - Contingency events—what happens when things go wrong?

Advisory Group #14 & 15 Agenda

- Advisory Group #14
 - Distribution Grid Analysis
 - Jobs and Economic Analysis
 - Q&A
- Advisory Group #15
 - Electricity Rate Analysis, LADWP Financial Services Organization
 - Air Quality
 - Health, Monetization of Benefits
 - Environmental Justice
 - Q&A

Tips for Productive Discussions



Let one person speak at a time

Keep phone/computer on mute until ready to speak



Help ensure everyone gets equal time to give input

Type “Hand” in Chat Function to raise hand



Keep input concise so others have time to participate

Also make use of Chat function



Actively listen to others, seek to understand perspectives



Offer ideas to address questions and concerns raised by others



Hold questions until after presentations

Clean Energy Future Outreach & Engagement



A Clean Energy Future is...

RELIABLE, AFFORDABLE, and SUSTAINABLE

55%



2025

80%



2036

100%



2045

Increase Renewable Supply

Eliminate Coal

Increase Local Solar

Increase Energy Storage

Invest in Proven Technologies

Meet and Manage Demand

Invest in Energy Efficiency

Increase Demand Response

Expand Electric Vehicles & Building Electrification

55%

80%

100%

HOW DO WE GET THERE?



2025



2036



2045



The Los Angeles 100% Renewable Energy Study

A unique and unprecedented study.

Possible through NREL's unique analytical and modeling capabilities.

Examines investment options to achieve 100%.

Offers scenarios and insights. Doesn't establish a path.

One part of LADWP's effort toward a Clean Energy Future.

Path to 100% Clean Energy

25 Year Path

Determine investments to achieve 100% Renewables

LA100

(100% Renewable Study)

Strategic Long-Term Resource Plan

Transition to 100% Renewables

Clean Grid LA

10 Year Path

Replace 1660 MW by 2030

**100% by
2045
Zero Carbon
by 2050**

55%



2025

80%



2036

AWARENESS

100%



2045

Who

Broad Citywide Outreach. This affects us all.



What

Communicate L.A.'s 100% clean energy goals and options available for getting there. **Scenarios provide insight on impacts to:**

Air Quality

Public Health

Jobs & Workforce

Development

Affordability

Electrification

Resiliency

Why

Policy Requires It, Climate Change Demands it



Legislation: (SB 1, SB 1368, AB 32, SB 100)



LA's Green New Deal: Renewable Energy Targets
55% by 2025; 80% by 2036; 100% by 2045



Climate Change

How

Today's plans become tomorrow's projects and programs.



55%



2025

80%



2036

FEEDBACK

100%



2045

How do we get there and how involved do our customers want to be?

Priorities
Concerns

Create Opportunities
Eliminate Barriers

Outreach

Community Meetings & Events

(Virtual & In-Person)

Partner with: Neighborhood Councils
& AG Partners for promotion

Work through COVID-19 Restrictions



Social Media

Facebook + Facebook Live

/ladwp

Twitter

@ladwp

Instagram

@ladwp1

Nextdoor



Other Channels

Traditional Media

Email/E-Newsletters

Website

Videos (Vimeo & YouTube)

Fact Sheets



Environmental Justice & Equity

How can we ensure access and inclusion for all communities?

→ Outreach Participation

→ Program Participation

→ Project Implementation

Timeline

LA100 Outreach

Round 1 (prelim results, describe study): Early Dec – Jan

Round 2 (final results, explain scenarios): March

Next Steps: Getting to Implementation

2021 Strategic Long-Term Resource Plan (SLTRP)

Updated every 2 years through a Participatory Process.

Outreach begins early 2021

NREL is available to meet with your groups

We can...

- Communicate study **objectives, scenarios, and results** to date
- Communicate aspects of a 100% RE system that could **inform decision-making** (e.g., impacts on costs, jobs, health, reliability...)

Example Agenda – Part One

- Introductions, Review City Council Motions, Clean Grid LA
- What could a transition to a 100% RE system look like?
 - **Benefits** like clean air, better health, access to jobs, access to affordable electricity (efficiency, rooftop solar), access to electrification (e.g., EV charging infrastructure)
 - Connect goals to **challenges** that we are seeing today (fires, poor air quality, extreme temperatures, electricity outages in the state)
 - Open discussion about **priorities**
- What is the LA100 study?
 - Scenarios, highlights of results

Example Agenda – Part Two

- **What do the results mean for decisions that might result from the study?**
 - **Speed** of transition (for RE targets, vehicle electrification...)
 - **Locations** of new investments (in/out of basin; coastal generation sites)
 - **Types** of investments (new transmission, biofuel/natural gas/hydrogen, customer rooftop solar vs utility-scale, level of demand response)
 - Discussion/Q&A
- **How can ratepayers get involved and provide input to LADWP?**
 - Discussion/Q&A
- **What LADWP programs can help residents lower their bills?**

DISCUSSION





The Los Angeles 100% Renewable Energy Study

LA100 Interactive Website

Advisory Group Meeting #13, Virtual Meeting #1

Jaquelin Cochran

National Renewable Energy Laboratory

October 1, 2020



Feedback

Today focuses less on specific results and more **how we can be effective communicators** with different audiences.

- How can we improve our communication and make the study relevant and accessible to the public?
- How can we facilitate meaningful dialogue about 100% RE transitions?

Access

<https://maps.nrel.gov/la100>

1. Write in chat box or e-mail Ashkan (Ashkan.Nassiri@ladwp.com) if you would like access
2. We will e-mail you the link, username, and password

The usernames and passwords are **unique to you**.

The results on the site are near final but not fully vetted (i.e., by you and LADWP) so we ask for your patience before sharing these results with others.

Troubleshooting and Tutorials

Last meeting we received a request to walk through the website once you have access

Troubleshooting and Tutorial on Using the Website

Monday, October 5

- 3:45-4:00 (PDT): Troubleshoot logging in
- 4:00 – 4:30: Walk through each page and respond to questions about where to find content

<https://global.gotomeeting.com/join/403821029>

You can also dial in using your phone.

United States: [1 \(571\) 317-3112](tel:15713173112)

Access Code: 403-821-029

LADWP will send out a calendar invitation

Goals for Sharing the Site with the Advisory Group Before the Study is Final (1 of 2)

1. Increase transparency by providing data and analysis
2. Provide more time to review results and ask questions
 - Results include more details than we can cover in meetings
 - As you review results, please save or e-mail your questions and bring them to Advisory Group meetings
 - For example, this week you might want to focus on the pages that are relevant to the next two virtual meetings:
 - Key Findings by Topic: RE Pathways
 - Key Findings by Topic: Reliability

Goals for Sharing the Site with the Advisory Group Before the Study is Final (2 of 2)

3. Solicit your feedback on how to improve the content of the site
 - What is **intuitive** or not?
 - For available results, what content are we **missing**?
 - What concepts are **unclear** or require better explanations, both for you and for future website viewers who are new to LA100?
 - How can we improve the communication of results that affect your ability to (later) **share findings** with others and **make informed decisions** about the future of LA's power system?
 - Website **functionality** issues—what isn't showing up right or isn't working correctly?



LA100: The Los Angeles 100% Renewable Energy Study

Home

Key Findings ▾

Exploratory Questions

Data Viewer

About

Glossary



The Los Angeles 100% Renewable Energy Study

[Read More](#)





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Key Findings ▾

Exploratory Questions

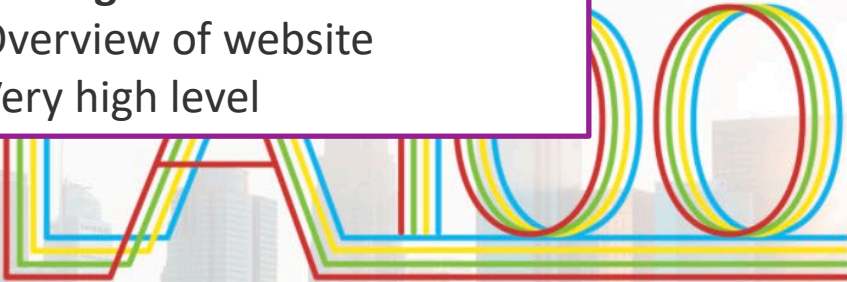
Data Viewer

About

Glossary

Home Page

- Overview of website
- Very high level

A large, stylized logo for "LA100" is centered on the page. The letters "LA" are in a bold, sans-serif font, and the "100" is in a similar font. The logo is composed of multiple overlapping, colorful lines in shades of red, yellow, green, and blue, giving it a vibrant, multi-layered appearance. The background of the page is a faded image of the Los Angeles city skyline.

The Los Angeles 100% Renewable Energy Study

[Read More](#)

LA100: The Los Angeles 100% Renewable Energy Study



Key Findings

- **Scenario**-specific results
 - One scenario at a time
 - 1-2 figures and text for each model (e.g., generation mix, greenhouse gas emissions)
 - Fairly high level
- **Topic**-specific results
 - Results by model showing all scenarios
 - Very detailed
 - Goal is to compile all results related to a particular interest (electricity demand projections, 100% RE investment pathways, costs, air quality...)

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Exploratory Questions

- Explain concepts using video and narrated dynamic results
 - Short explanations related to concepts reviewed during AG meetings (e.g., why the last 10% is harder than the first 90%)
 - Short explanations of interesting time periods, e.g., how does LADWP maintain balance on a rainy day?
- This page will be updated over time based on your feedback of what we should cover (and how, e.g., text explanations vs. video)

LA100: The Los Angeles 100% Renewable Energy Study



Data Viewer

- Time-series results
- Map-based
- Add layers
- Go to whatever time period or location or result-type that interests you
- Includes some buttons that prepopulate settings so that you can see specific results, e.g.,
 Extreme Heat—Electricity demand by location and end use on hottest day



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Key Findings ▾

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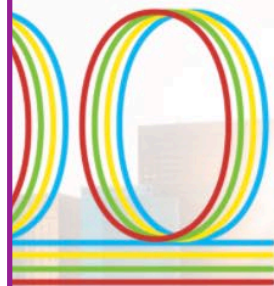
About

Glossary

About

- Background on the study
- City Council Motions
- Advisory Group
- LADWP & NREL links
- FAQs (to be added)

Read More



LA100: The Los Angeles 100% Renewable Energy Study



LA100: The Los Angeles 100% Renewable Energy Study

Home

Key Findings ▾

Exploratory Questions

Data Viewer

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Glossary

Glossary

- Words and acronyms defined

Let us know if we are missing something

The Los Angeles 100% Renewable Energy Study

[Read More](#)

Website Demo

What we have not included

Could still add:

- Links to LADWP programs (e.g., efficiency)

No plan to add:

- Online poll
- Comment link (to automatically e-mail NREL); we do provide contact info

Feedback? Questions?